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## Singapore puts focus on threatened miscarriages

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Develop urine test that identifies pregnancy outcome after threatened miscarriage

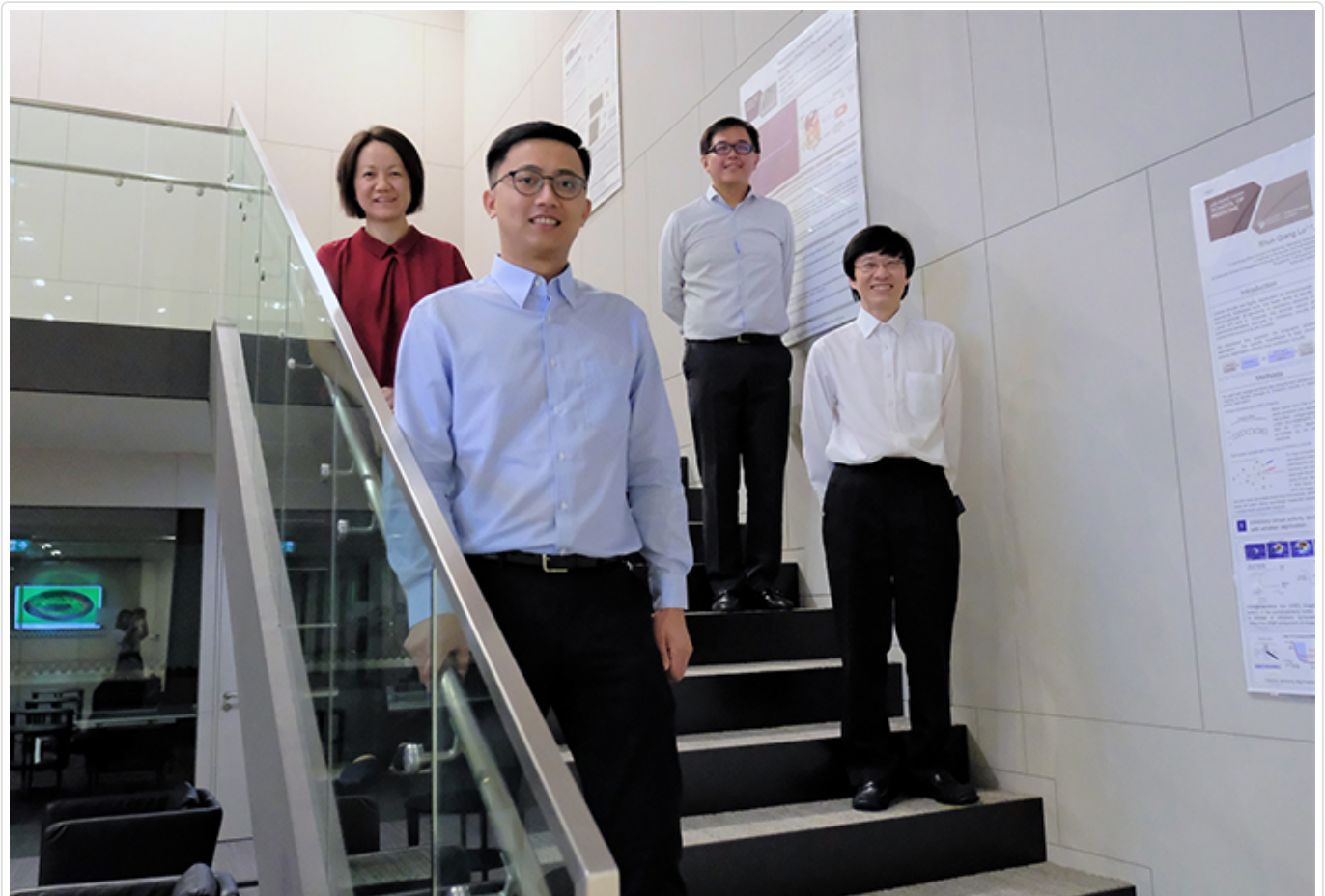


Image credit- NTU

Researchers at Nanyang Technological University, Singapore (NTU Singapore) and clinicians at KK Women's and Children's Hospital (KKH) have developed a urine test that within 30 minutes, can gauge pregnancy outcomes for women presenting with signs of threatened miscarriage.

Threatened miscarriage – characterised by abdominal pain with vaginal bleeding – is one of the most common gynaecological emergencies worldwide.

The new test developed by NTU scientists in collaboration with doctors from KKH uses an innovative surface-enhanced Raman scattering (SERS) chip that requires a droplet of urine to screen for urine molecules associated with miscarriage risk.

It does this through the chemical 4-mercaptophenylboronic acid (MPBA) which is coated on the chip. MPBA probes and selectively captures the miscarriage-related molecules pregnane and tetrahydrocortisone (THC) from the urine.

The researchers believe their initial success points the way towards a non-invasive, fast, and accurate approach for triaging pregnant women with a threatened miscarriage, identifying those who are at higher risk of a spontaneous miscarriage.

The NTU team has patented the innovation and is now looking to evaluate the performance of the toolkit in hospital settings, with the aim of commercialising the product in future.

The researchers are also working on adapting the toolkit for use in other types of health conditions.